

REMARKS

Claims 1-27 are pending in this application. Claim 8 is formally amended to depend on claim 10 to ensure that the feature of "said fourth mode" has proper antecedent basis. Applicant respectfully submits that no new matter is added by this formal amendment to claim 8.

Claims 1, 2, 10, 21, 24, 25 and 27 are amended by this response to further clarify and define the present claimed invention. Support for the amendments to the claims may be found throughout the specification and drawing figures and, more specifically, on page 11, lines 3 – 7, lines 20 – 26 and page 11, line 27 – page 12, line 5. Therefore, Applicant respectfully submits that no new matter is added by the amendments to the claims.

Rejection of Claims 1-8, 18, 20, 21, 23-25 and 27 under 35 U.S.C. 102(b)

Claims 1-8, 18, 20, 21, 23-25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Maschke et al. (U.S. Patent No. 6,221,012).

Amended claim 1 provides a system for monitoring and processing signal parameters acquired from a patient in multiple operational modes and housed as a portable monitoring unit. A data acquisition processor receives and processes patient parameter data from a plurality of different patient attached sensors to provide processed patient parameter data. An image reproduction device displays processed patient parameter data. A communication interface communicates the processed patient parameter data the image reproduction device for display in a first mode, a docking station when the portable monitoring unit is docked in the docking station in a second mode, and a central monitoring station remotely located from the monitoring unit for storage of processed patient parameter data in a patient history repository via a network access point coupled to a communication network via wireless communication in a third mode. The third mode of operation is automatically enabled in response to detecting that a wired connection

between the network access point and the communication network is not available. A power unit is provided for re-charging a battery in the portable monitoring unit in the second mode. For the reasons presented below, Maschke fails to show or suggest each feature of the present claimed invention and therefore does not anticipate the present claimed invention.

Maschke describes a patient monitoring apparatus that includes a plurality of data acquisition modules or pods. The pods include sensors that are connected to the patient for collecting patient data. The pods are further connected to the patient monitor such that the number of cables required for sensing particular patient parameters is reduced when being connected to the monitor. The monitor receives the patient data from the acquisition pods and is able to display the data transmitted thereto. The monitor may be coupled to a docking station and receive power from the docking station. Additionally, the docking station, and not the monitor, provides communication services for the monitor coupled thereto (see Maschke, col. 3 and 4).

Maschke is unlike the present claimed invention because Maschke requires two separate housing structures, the monitor and the docking station, in order to accomplish the present claimed operations. In contrast, the claimed invention advantageously provides complete mobile communication between healthcare professionals and data being derived from the patient connected to the portable monitoring unit. The claimed system provides a "communication interface" that operates in three modes to provide the processed patient parameter data to different sources for display and/or storage. Thus, the claimed device improves intercompability between multiple devices, particularly with respect to transferring data between devices despite the type connection mode. The claimed portable monitor communicates in three modes with three different devices or systems. Maschke fails to disclose or suggest an equivalent monitoring device. Specifically, Maschke neither discloses nor suggests a "communication interface for communicating said processed patient parameter data" in three different operational modes. Specifically, Maschke fails to

show or suggest a “communication interface for communicating said processed patient parameter data to...a central monitoring station remotely located from said monitoring unit for storage of said processed patient parameter data in a patient history repository via wireless communication in a third mode” as in the present claimed invention. There is nothing in Maschke that discloses or suggests wireless communication with a central monitoring station via a network access point. Additionally, the Rejection cites column 3, lines 41 – 43 of Maschke as anticipating the claimed feature. Applicant respectfully disagrees. The cited section of Maschke recites “any manner of communicating the acquired data signals to the monitor 102, such as a wireless communication link”. However, when reading the immediately preceding lines (col. 3, line 39 – 40) in conjunction with the lines cited in the Rejection, it is made clear that “the detachable coupling of the data acquisition modules, and in particular for pods 150 – 156, is intended to include any manner of communicating...such as a wireless communication link”. In other words, the only mention of wireless communication of any data occurs between the data acquisition modules (150-158, 160, 162) and the portable monitor 102 (see Maschke, column 3, lines 39-43). This is fundamentally different from and not equivalent to the claimed monitoring system “housed as a portable monitoring unit” that includes the “data acquisition processor...to provide processed patient parameter data” and a “communication interface” that communicates processed patient data to “a **central monitoring station remotely** located from said monitoring unit for storage of processed patient parameter data in a patient history repository via a network access point coupled to a communication network via wireless communication”. Unlike the present claimed invention, the minimal disclosure of wireless communication in Maschke is between the data acquisition pod and the monitor. There is nothing in Maschke that discloses or suggests that the portable monitoring unit of Maschke includes the present claimed “communication interface” as in the present claimed invention. The Maschke monitor only communicates with a docking station when the monitor is physically connected to the docking station. This is wholly unlike the claimed invention which provides a “third mode” of operation that allows the portable monitoring device itself to communicate directly with “a central

monitoring system remotely located from said monitoring unit for storage of processed patient parameter data in a patient history repository". Contrary to the claimed invention, Mashcke merely provides a unit that receives patient data and functions as an intermediary device that transfers the data to the docking station. The claimed arrangement advantageously provides the "third mode" which allows the "portable monitoring unit" to wireless communicate processed patient data to "a central monitoring system". Maschke is unable to operate in the present claimed manner.

Furthermore, there is nothing in Maschke that discloses or suggests that this "third mode" of operation is "automatically enabled in response to detecting that a wired connection between said communication interface and said communication network is not available" as in the present claimed system. Rather, as discussed above, the wireless communication in Maschke is between components that are not equivalent to those claimed in claim 1. Maschke merely makes a cursory mention of wireless communication. However, there is no mention of advantageously "automatically enabling" the third mode when "wired connection is not available" as in the present claimed invention. Thus, the claimed invention provides the improved benefit of constant communication of data for display and review by healthcare professionals regardless of the position of the portable monitoring unit. Maschke fails to disclose an equivalent system.

Therefore, as Maschke fails to provide show or suggest each feature claimed in claim 1, Applicant respectfully submits that Maschke does not anticipate the present claimed invention. Consequently, withdrawal of the rejection of claim 1 is respectfully requested.

Claim 2 is considered patentable for the reasons presented above with respect to claim 1. Claim 2 is also considered patentable because Maschke fails to disclose or suggest that the "communication interface automatically switches between said second and third mode to maintain continuous communication of processed patient parameter data, in

response to detection of an operational communication link” and “communicates said processed patient parameter data to said image reproduction device for display in said first mode; said docking station when said portable monitoring unit is docked in said docking station in said second mode; and said network access point coupled to said communication network via wireless communication in said third mode; without requiring physical removal of said plurality of patient attached sensors”. Maschke is not at all concerned with maintaining continuous communication and display of processed patient parameters as in the present claimed invention. In fact, Maschke is unable to operate in the claimed manner because Maschke fails to disclose or suggest the second and third communication modes of the present invention. Rather, the monitor in Maschke can merely communicate with a docking station. There is no architecture in Maschke enabling wireless communication of processed patient parameter data for storage at “central monitoring station”. Moreover, as discussed above, the only mention of wireless communication is the communication of sensed patient data with the monitor. Thus, Maschke is fundamentally different from and not equivalent to the present claimed invention. Consequently, withdrawal of the rejection of claim 2 is respectfully requested.

Claims 3 – 7 are dependent on claim 1 and are considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claims 3 – 7 is respectfully requested.

Claim 8 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 8 is also considered patentable because Maschke fails to disclose or suggest that “said first and third modes operate concurrently to communicate said processed patient parameter data to said image reproduction device for display and to said central monitoring station for storage in a patient history repository via said network access point coupled to said communication network” as recited in claim 8 of the present invention. As discussed above with respect to claim 1, Maschke merely provides for wireless communication of data acquired by an acquisition pod to a portable

monitor. There is nothing in Maschke that discloses or suggests “communicating said processed patient parameter data to...a network access point coupled to a communication network via wireless communication”. Thus, as no wireless communication of processed patient parameter data to a network access point is possible using the Maschke system, Maschke is similarly not able to concurrently communicate parameters for display and wirelessly communicate parameter data to a network access point as in the claimed arrangement.

The Rejection cites column 5, lines 14 – 17 as anticipating the feature claimed in claim 8. Applicant respectfully disagrees. Rather, the cited section of Maschke is describing the functionality of a docking station (110, Fig 1) and NOT the monitor (102, Fig. 1) of Maschke. The monitor 102 is not the same element as the docking station 110. Thus, the functionality of the docking station is not part of the monitor in Maschke. This is fundamentally different from the claimed invention wherein the system is “housed as a portable monitoring unit” includes specific system architecture that enables concurrent communication of processed patient parameter data to “an image reproduction device” and “to a network access point...via wireless communication”. The Maschke system requires three separate and distinct components that needs to be connected to one another in order to operate in the intended manner whereas the claimed invention provides a single system “housed as a portable monitoring unit” that acquires and processes patient data from sensors and concurrently communicates the processed patient data for display and to a network access point via wireless communication. Moreover, Maschke fails to disclose or suggest wireless communication of processed patient data to a network access point. Consequently, withdrawal of the rejection of claim 8 is respectfully requested.

Claim 10 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 10 is also considered patentable because Maschke fails to disclose or suggest that “said communication interface automatically queries said communication network to determine if a second image reproduction device

having an image resolution higher than said image reproduction device is present on said communication network” and “in a fourth mode, said communication interface communicates said processed patient parameter data to at least one of, (a) a processor for conditioning said processed patient parameter data for display on said second reproduction device of greater image resolution than said image reproduction device and automatically communicating said conditioned processed patient parameter data to said second reproduction device and (b) a processor for conditioning said processed patient parameter data for display on a mobile tablet style reproduction device” as recited in claim 10. Specifically, Maschke fails to show or suggest automatically querying network resources to see if a second image reproduction device having a higher resolution is connected on the network. Maschke fails to contemplate this (or any equivalent) feature.

Additionally, The Rejection cites column 5, lines 9 – 13 as providing anticipatory disclosure of feature “(a)” and thus anticipating the entire fourth mode of operation. Applicant respectfully disagrees. Unlike the present claimed invention, the cited section alleged to be equivalent to the claimed arrangement, is performed by a docking station 110 and not a system “housed as a portable monitoring unit” as in the claimed invention. The monitor 102 of Maschke is merely an intermediary device for displaying parameters. Thus, the Maschke system, unlike the claimed invention, requires the use of a docking station to display data on a screen other than the one that is part of the Maschke monitor. Moreover, there is nothing in Maschke that discloses or suggests that processed patient parameter data is communicated “to a processor for conditioning said processed patient parameter data for display on said second reproduction device of **greater image resolution than said image reproduction device** and automatically communicating said conditioned processed patient parameter data to said second reproduction device” as in the claimed arrangement. Instead, Maschke merely provides that, upon connection of the monitor with the docking station, the docking station can connect to a remote display device and describes the remote display as a large display 122 or television display 124. A large display or television display is NOT equivalent to a second display having a **higher image resolution** as

compared to the “image reproduction device” position on the portable monitor. Also, there is nothing that enables “conditioning” data to be displayed on a device having a higher resolution and “automatically communicating said conditioned” data to the higher resolution image reproduction device as in the claimed invention. Additionally, there is no show or suggest “conditioning said processed patient parameter data for display on a mobile tablet style reproduction device” as in the claimed arrangement. Consequently, withdrawal of the rejection of claim 10 is respectfully requested.

Claim 11 is dependent on claims 1 and 10 and is considered patentable for the reasons presented above with respect to claims 1 and 10. Consequently, withdrawal of the rejection of claim 11 is respectfully requested.

Claims 12 – 14 are dependent on claim 1 and are considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claims 12 - 14 is respectfully requested.

Claims 18 and 20 are dependent on claim 1 and are considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claims 18 and 20 is respectfully requested.

Independent claim 21 is considered patentable for the reasons presented above with respect to claim 1. Independent claim 21 is also considered patentable because Maschke fails to disclose or suggest “a central monitoring station remotely located from said monitoring unit for display of processed patient parameter data via a network access point coupled to a communication network via wireless communication in a second mode, said second mode being automatically initiated in response to determining that said monitoring unit is undocked from said first docking station” as in the present claimed invention. As discussed above, the only wireless communication described in Maschke enables communication of sensed patient data from the acquisition pod to the monitor. The monitor

does not have any communication ability aside from transferring data to the docking station when docked. Thus, in view of the lack of communication ability of the Maschke monitor, Maschke is unable to operate in the present claimed "second mode". The present claimed second mode is automatically enabled when it is determined that the monitor is undocked. In Maschke, when the monitor is undocked, the only communication that could occur is between the data acquisition pods and the monitor. The Maschke monitor is not able to further communicate patient data unless it is coupled to the docking station. This is fundamentally different from and not equivalent to "communicating said processed patient parameter data to...a central monitoring station remotely located from said monitoring unit for display of processed patient parameter data" wirelessly via a network access point. Consequently, withdrawal of the rejection of claim 21 is respectfully requested.

Claim 23 is dependent on claim 21 and is considered patentable for the reasons presented above with respect to claims 1 and 21. Consequently, withdrawal of the rejection of claim 23 is respectfully requested.

Independent claim 24 is considered patentable for the reasons presented above with respect to claims 1 and 10. Consequently, withdrawal of the rejection of claim 24 is respectfully requested.

Independent claim 25 is considered patentable for the reasons presented above with respect to claim 1. Claim 25 is also considered patentable for the reasons presented above with respect to claims 2 and 8. Consequently, withdrawal of the rejection of claim 25 is respectfully requested.

Independent claim 27 is considered patentable for the reasons presented above with respect to claim 1. Consequently, withdrawal of the rejection of claim 27 is respectfully requested.

In view of the above remarks and amendments to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure in Maschke that anticipates the present claimed invention. It is thus further respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of Claim 9 under 35 U.S.C. 103(a)

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maschke et al.

Claim 9 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 9 is also considered patentable because the Official Notice taken on pages 8 and 9 of the Rejection, fail to add anything that discloses or suggests a portable monitoring unit including a “data acquisition processor for receiving and processing patient parameter data from a plurality of different patient attached sensors to provide processed patient parameter data” and a “communication interface for communicating said processed patient parameter data to...said image reproduction device for display in a first mode” and “a central monitoring station remotely located from said monitoring unit storage of processed patient parameter data in a patient history repository via a network access point coupled to a communication network via wireless communication in a third mode” wherein “said image reproduction device is powered down after a predetermined time interval to conserve power in response to a preprogrammed instruction”. The Maschke system fails to disclose or suggest the claimed third operational mode. Consequently, withdrawal of the rejection of claim 9 is respectfully requested.

In view of the above remarks, it is respectfully submitted that the Official Notice adds nothing to Maschke that discloses or suggests the present invention as claimed in claim 1. As claim 9 is dependent on claim 1, Applicant respectfully submits that Maschke

with Official Notice also does not make the present claimed invention unpatentable. Consequently, withdrawal of the Rejection of claim 9 is respectfully requested.

Rejection of Claims 15 and 16 under 35 U.S.C. 103(a)

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maschke et al.

Claim 15 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 15 is also considered patentable because the Official Notice cited on page 9 of the Rejection fails to make the claimed invention unpatentable. While the Official Notice states that Bluetooth is well known in the art and thus making the wireless communication link Bluetooth compatible is obvious, the Official Notice (with Maschke) fails to disclose or suggest “a communication interface for communicating processed patient parameter data to...a central monitoring station remotely located from said monitoring unit storage of processed patient parameter data in a patient history repository via a network access point coupled to a communication network via wireless communication in a third mode” as in the claimed arrangement. As discussed above, the only brief mention of wireless communication in Maschke is between data acquisition pods and the portable monitor. There is nothing in Maschke that discloses or suggests a portable monitor able to operate in a third mode to communicate processed patient parameter data to a network access point coupled to a communication network. Consequently, withdrawal of the rejection of claim 15 is respectfully requested.

Claim 16 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claims 1 and 15. Consequently, withdrawal of the rejection of claim 16 is respectfully requested.

In view of the above remarks, it is respectfully submitted that the Official Notice adds nothing to Maschke that discloses or suggests the present invention as claimed in

claim 1. As claims 15 and 16 is dependent on claim 1, Applicant respectfully submits that Maschke with Official Notice also does not make the present claimed invention unpatentable. Consequently, withdrawal of the rejection of claims 15 and 16 is respectfully requested.

Rejection of Claim 17 under 35 U.S.C. 103(a)

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maschke et al.

Claim 17 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 17 is also considered patentable because the Official Notice recited on page 10 of the Rejection, alone or in combination with Maschke fails to disclose or suggest that “said communication interface automatically switches between wired and wireless operation to maintain continuous communication with at least one of (a) a local point of care device, (b) a communication network and (c) a central monitoring station, in response to detection of an operational communication link search operation” as in the present claimed invention.

Specifically, the Rejection takes Official Notice that it would be obvious to automatically switch between wired and wireless communication because detection of an optimal connection is crucial for the performance of the system. It is acceptable for official notice to be taken of a fact of “wide notoriety”, In re Howard, 394 F. 2d 869, 157 USPQ 615, 616 (CCPA 1968) e.g. a fact commonly known to laymen everywhere, 29 AM. Jur 2D Evidence S. 33 (1994) or of a fact that is capable of “instant and unquestionable demonstration”, In re Ahlert 424 F. 2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). However, official notice should not be taken of a fact normally subject to the possibility of rational disagreement among reasonable men, In re Eynde, 480 F. 2d 1364, 1370; 178 USPQ 470, 474 (CCPA 1973). It is respectfully submitted that the elements of which the Rejection takes Official Notice, in the context of claim 17, are neither features of “wide

notoriety", (In re Howard), nor capable of "instant and unquestionable demonstration" (In re Ahlert). On the contrary, these features are subject to the possibility of rational disagreement given the claim arrangements within which they reside. Consequently, Applicants take exception to instance of Official Notice used in the rejection. Further, Applicants request that a showing be made of evidence that these features were well known, in the context of claim 17 at the time the invention was made.

Furthermore, Applicant respectfully submits that Maschke fails to disclose or suggest any mechanism that is operative "in response to a detection of an operational communication link during a communication link search operation" as in the claimed arrangement. As discussed above, the only deviation from wired communication described in Maschke is the wireless communication between acquisition pod and portable monitor. There is nothing in Maschke that contemplates multiple operational communication modes as in the claimed arrangement and certainly nothing that discloses or suggests automatic switching between wired and wireless communication with at least one of "local point of care device", "a communication network" and "a central monitoring system". In fact, Maschke would not be able to encompass the automatic switching because there is no mention of wireless communication between anything other than a data acquisition pod and the monitor. Consequently withdrawal of the Rejection of claim 17 is respectfully requested.

In view of the above remarks, it is respectfully submitted that the Official Notice adds nothing to Maschke that discloses or suggests the present invention as claimed in claim 1. As claim 17 is dependent on claim 1, Applicant respectfully submits that Maschke with Official Notice also does not make the present claimed invention unpatentable. Consequently, withdrawal of the Rejection of claim 17 is respectfully requested.

Rejection of Claims 19, 22 and 26 under 35 U.S.C. 103(a)

Claims 19, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maschke et al. in view of Carter et al. (USP 7,156,807).

Claim 19 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 19 is also considered patentable because Carter (with Maschke) fails to disclose or suggest that the “communication interface communicates with a wireless location detection system and supports patient location tracking” as in the claimed invention. The Rejection cites column 2, lines 7-10 of Carter as disclosing the claimed feature. However, while Carter describes tracking a patient via an RF module that is connected to a network access point, Carter fails to disclose or suggest a portable monitoring unit as in the present claimed invention. Unlike the claimed arrangement, Carter is a network infrastructure that provides different devices the ability to connect to a single network at various points around a hospital. The network infrastructure of Carter is NOT the portable monitoring device that is able to acquire and process patient parameter data and communicate the processed, via a communication interface, for display and to a network access point via wireless communication. Instead, Carter may be the network access point. Carter is NOT a portable monitoring device as in the claimed invention. Carter is a fundamentally different system than the claimed arrangement.

Additionally, it is respectfully submitted that the combination of network access point system of Carter with the monitoring device of Maschke is improper because they are fundamentally unrelated to one another. Maschke describes a system that has three components connected to one another that acquires data (data acquisition pods), receives and displays acquired data (portable monitor) and further transmits data (the docking station). Moreover, there is nothing in Maschke that describes wireless communication beyond a wireless connection between the pods and the monitor. Maschke contains no suggestion of wireless communication of any data by either the monitor or the docking station. In contrast to Maschke, Carter provides a system of access points for receiving

wireless communication from different devices. As Maschke fails to provide a monitor of any type that is able to communicate wirelessly, the combination of the Maschke monitor with the Carter access points would be inoperable. In view of the inoperability of the Maschke monitor with the Carter access infrastructure, it is respectfully submitted that any combination of these system would be improper.

Furthermore, any combination of these systems would still not produce the present claimed system that provides a portable monitoring unit with “a communication interface for communicating processed patient parameter data to...a network access point coupled to a communication network via wireless communication” which also “communicates with a wireless location detection system and supports patient location tracking” as in the claimed arrangement. Consequently, withdrawal of the rejection of claim 19 is respectfully requested.

Claim 22 is dependent on claims 1 and 19 and is considered patentable for the reasons presented above with respect to claims 1 and 19. Consequently, withdrawal of the rejection of claim 22 is respectfully requested.

Claim 26 is dependent on claims 1 and 22 and is considered patentable for the reasons presented above with respect to claims 1 and 22. Claim 26 is also considered patentable for the reasons presented above with respect to claims 10 and 19. Consequently, withdrawal of the rejection of claim 26 is respectfully requested.

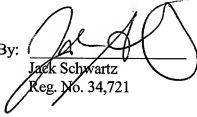
In view of the above remarks, it is respectfully submitted that Maschke and/or Carter, when taken alone or in combination, fail to make the present invention as claimed in claim 1 unpatentable. As claims 19, 22 and 26 are dependent on claim 1, they are also not made unpatentable by Maschke (with Carter). Consequently, withdrawal of the rejection of claims 19, 22 and 26 is respectfully requested.

Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No additional fee is believed due. However, if an additional fee is due, please charge the additional fee to Deposit Account 50-2828.

Respectfully submitted,
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